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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,305	02/08/2006	Jean Beguinot	Q88042	3751

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER	
ROE, JESSEE RANDALL	

ART UNIT	PAPER NUMBER
1793	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/535,305	BEGUINOT ET AL.	
	Examiner	Art Unit	
	Jessee Roe	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2009 & 19 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,2 and 4-7* is/are allowed.

6)☒ Claim(s) *8-13* is/are rejected.

7)☒ Claim(s) *10-11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 1-2 and 4-13 are pending wherein claim 3 is canceled and claims 8-13 are amended and withdrawn from consideration.

Terminal Disclaimer

The terminal disclaimers filed on 19 May 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 7,462,251 and U.S. Patent No. 7,459,041 have been reviewed and accepted.

Election/Restrictions

Claims 1-2 and 4-7 are allowable. The restriction requirement of Group I, claims 1-2 and 4-7, drawn to a method of producing a plate of steel and Group II, claims 8-13, drawn to a steel workpiece, as set forth in the Office action mailed on 9 May 2008, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn**.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction

requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Claim Objections

Claims 10-11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

With respect to the recitation "Ti + Zr/2 $\geq$ 0.4%" in claim 10, the Examiner notes that line 16 of claim 8 recites "0.5% < Ti + Zr/2 $\leq$ 1.1%". Therefore, claim 10 fails to further limit claim 8 because claim 10 allows for values of Ti + Zr/2 less than 0.5.

With respect to the recitation "C* $\geq$ 0.12%" in claim 11, the Examiner notes that C* is not mentioned in claim 8 and therefore claim 11 fails to further limit claim 8.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to the recitation "C* ≥ 0.12%" in claim 11, it is unclear what is being referred to by C* since C* is not referred to in claim 8.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 8-13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10-11 and 13-17 of copending Application No. 12/140,433. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 8 of the instant invention is substantially the same as claim 10 of copending Application No. 12/140,433. The primary differences in the claims is the carbon range in copending Application No. 12/140,433.is 0.35 to 0.80 weight percent,

whereas the carbon range in the instant invention is 0.24 to less than 0.35 weight percent; the range of silicon plus aluminum in copending Application No. 12/140,433 is 0.35 to 2 weight percent whereas the range of silicon plus aluminum in the instant invention is 0.5 to 2 weight percent; the range of molybdenum in copending Application No. 12/140,433 is 0 to 0.50 weight percent whereas the range for molybdenum in the instant invention is from 0 to 1 weight percent; the range for molybdenum plus half the tungsten in copending Application No. 12/140,433 is 0.1 to 0.5 weight percent whereas the range for molybdenum plus half the tungsten fro the instant invention is 0.1 to 1 weight percent; the range for titanium in copending Application No. 12/140,433 is 0 to 2 weight percent whereas the range for titanium in the instant invention is 0 to 1.1 weight percent; the range for zirconium in copending Application No. 12/140,433 is 0 to 4 weight percent in copending Application No. 12/140,433 whereas the range for zirconium in the instant invention is 0 to 2.2 weight percent; the range for titanium plus half the zirconium in copending Application No. 12/140,433 is 0.05 to 2 weight percent whereas the range for titanium plus half the zirconium in the instant invention is 0.5 to 1.1 weight percent; sulfur is limited to impurity levels at maximum in copending Application No. 12/140,433, due to the "consists of" transitional language, whereas in the instant invention the range for sulfur is 0 to 0.15 weight percent.

The Examiner notes that the amounts of silicon, aluminum, manganese, nickel, chromium, molybdenum, tungsten, boron, titanium, zirconium, sulfur, and nitrogen in claim 10 of copending Application No. 12/140,433 overlaps the composition of claim 8 in the instant invention, which is *prima facie* evidence of obviousness. It would have been

obvious to one of ordinary skill in the art to select the claimed amounts of silicon, aluminum, manganese, nickel, chromium, molybdenum, tungsten, boron, titanium, zirconium, sulfur, and nitrogen from those in copending Application No. 12/140,433 because copending Application No. 12/140,433 discloses the same utility.

With respect to the carbon content of copending Application No. 12/140,433 relative to the instant invention, a *prima facie* case of obviousness exists where the claimed ranges and the prior art ranges do not overlap but are close enough that one skilled in the art would have expected the alloys to have the same properties. MPEP 2144.05 I.

With respect to the relationship "C—Ti/4 – Zr/8 + 7xN/8≥ 0.095%" in line 26 of claim 8 of the instant invention, line 24 of claim 10 in copending Application No. 12/140,433 recites "0.1%≤ C – Ti/4 – Zr/8 + 7xN/8 ≤ 0.55%". Therefore both copending Application No. 12/140,433 and the instant invention overlap in scope.

With respect to the relationship "1.05xMn + 0.54xNi + 0.50xCr + 0.3x(Mo + $W/2)^{1/2}$ + K > 1.8 with K = 0.5 if B ≥ 0.0005% and K = 0 if B < 0.0005%" in lines 28-29 of claim 8, lines 26-27 of claim 10 in copending Application No. 12/140,433 recites the same limitation.

With respect to the recitation "the steel having a martensitic or martensitic/bainitic structure, the structure containing from 5% to 20% of retained austenite and carbides" in lines 28-29 of claim 8 of the instant invention, lines 28-30 of claim 10 of copending Application No. 12/140,433 recites the same limitation.

With respect to the limitation "1.05xMn + 0.54xNi + 0.50xCr + 0.3x(Mo + W/2)$^{1/2}$ + K > 2" in claim 9 of the instant invention, claim 11 of copending Application No. 12/140,433 recites the same limitation.

With respect to the limitation "Ti + Zr/2 ≥ 0.4%" in claim 10 of the instant invention, claim 14 of copending Application No. 12/140,433 recites "Ti + Zr/2 > 0.10%" and claim 15 of copending Application No. 12/140,433 recites "Ti + Zr/2 > 0.30%". Therefore, the scope of copending Application No. 12/140,433 overlaps the scope of the instant invention.

With respect to the limitation "C* ≥ 0.12%" in claim 11 of the instant invention, claim 16 of copending Application No. 12/140,433 recites "C* ≥ 0.22%". Therefore, copending Application No. 12/140,433 and the instant invention overlap in scope.

With respect to the limitation "Si + Al ≥ 0.7%" in claim 12, of the instant invention, claim 13 of copending Application No. 12/140,433 recites "Si + Al > 0.5". Therefore, copending Application No. 12/140,433 and the instant invention overlap in scope.

With respect to the recitation "wherein the plate has a thickness of from 2 mm to 150 mm" in claim 13, claim 17 of copending Application No. 12/140,433 recites this same limitation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claims 1-2 and 4-7 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or adequately suggest a method for producing a plate of steel alloy having a defined composition with defined relationships, as recited by claim 1, comprising the steps of heating plate to an elevated temperature by hot forming in the hot state or after austenitization by reheating in a furnace followed with cooling at a mean rate greater than 0.5C/s between a temperature greater than Ac_3 and a temperature of from approximately T= 800-270xC*-90xMn-37xNi-70xCr-83x (Mo + W/2) to T-50C whereby C* = C-Ti/4 - Zr/8 + 7xN/8 > 0.095 with the plate then subjected to cooling at a mean core cooling rate Vr < 1150xep$^{-1.7}$ greater than 0.1C/s between the temperature T and 100C, ep being the thickness of the plate expressed in mm, and then subjected to further cooling as far as ambient temperature with optional planishing

Response to Arguments

Applicant's arguments with respect to claims 8-13 have been considered but are moot in view of the new ground(s) of rejection/objection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571)272-5938. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art Unit 1793

JR